

Amendments to the Claims

1-8. (Cancelled)

9. (Currently amended) A high-melting superalloy comprising (A) from 5 to 65 atomic % of nickel and (B) from 5 to 20 atomic % of at least one metal selected from the group consisting of ~~titanium, zirconium, hafnium, vanadium, niobium, and tantalum~~, with (C) from 30 to 75 atomic % of ~~iridium or rhodium~~, or a mixture ~~thereof~~ of rhodium and iridium, and having a two-phase structure in which a L1₂ phase is precipitated in a matrix of a fcc phase, and an amount of the L1₂ phase is from 20 to 80 % by volume.

10. (Currently amended) A high-melting superalloy comprising (A) from 5 to 65 atomic % of nickel, (B) from 3 to 15 atomic % of at least one metal selected from the group consisting of ~~titanium, zirconium, hafnium, vanadium, niobium, and tantalum~~, and (C) from 20 to 75 atomic % of ~~iridium or rhodium~~, or a mixture ~~thereof~~ of rhodium and iridium, with (D) from 4 to 13 atomic % of aluminium, and having a two-phase structure in which a L1₂ phase is precipitated in a matrix of a fcc phase, and an amount of the L1₂ phase is from 20 to 80 % by volume.

11. (Withdrawn) A method of producing a high-melting superalloy as set forth in claim 9, which comprises compounding at least one of an iridium-base superalloy made of iridium as a base added with at least one metal selected from the metal group consisting of titanium, zirconium, hafnium, vanadium, niobium, and tantalum and a rhodium-base superalloy made of rhodium as a base added with at least one metal selected from the above-described metal group, with nickel, followed by ingoting to produce a high-melting superalloy.

12. (Withdrawn) A method of producing a high-melting superalloy as set forth in claim 9, which comprises compounding at least one of an iridium-base

superalloy made of iridium as a base added with at least one metal selected from the metal group consisting of titanium, zirconium, hafnium, vanadium, niobium, and tantalum and a rhodium-base superalloy made of rhodium as a base added with at least one metal selected from the above-described metal group, with a nickel-base alloy made of nickel as a base added with at least one metal selected from the above-described metal group, or aluminum, followed by ingoting to produce a high-melting superalloy.

13. (Withdrawn) A method of producing a high-melting superalloy as set forth in claim 10, which comprises compounding at least one of an iridium-base superalloy made of iridium as a base added with at least one metal selected from the metal group consisting of titanium, zirconium, hafnium, vanadium, niobium, and tantalum and a rhodium-base superalloy made of rhodium as a base added with at least one metal selected from the above-described metal group, with nickel, followed by ingoting to produce a high-melting superalloy.

14. (Withdrawn) A method of producing a high-melting superalloy as set forth in claim 10, which comprises compounding at least one of an iridium-base superalloy made of iridium as a base added with at least one metal selected from the metal group consisting of titanium, zirconium, hafnium, vanadium, niobium, and tantalum and a rhodium-base superalloy made of rhodium as a base added with at least one metal selected from the above-described metal group, with a nickel-base alloy made of nickel as a base added with at least one metal selected from the above-described metal group, or aluminum, followed by ingoting to produce a high-melting superalloy.

15. (New) A high-melting superalloy as set forth in claim 9, wherein the atomic ratio of (A) to (B) is from 0.25:1 to 12:1.

16. (New) A high-melting superalloy as set forth in claim 10, wherein the sum of atomic % of (A) and (C), and (B) and (D) are as follows:

(A) + (C) \geq 75 atomic %; and

(B) + (D) \leq 25 atomic %.